

REMARKS

The Examiner objected to the amendment to the abstract.

The Examiner rejected claims 1, 6 and 7 on the ground of alleged nonstatutory double patenting over claim 15 of copending Application No. 11/231,091, (U.S. Patent Application No. 20060015550 A1).

The Examiner rejected claims 1, 6 and 7 under the judicially created doctrine of obviousness-type double patenting as allegedly being respectively unpatentable over claim 1 of U.S. Patent No. 6,578,196 B1.

The Examiner rejected claims 1-8, 10-13 and 15-18 under 35 U.S.C. § 112, first paragraph, as based on a disclosure which is not enabling.

The Examiner rejected claims 1-8, 10-13 and 15-18 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner rejected claims 1-8, 10-13 and 15-18 under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter.

The Examiner rejected claims 1-8, 10-13 and 15-18 under 35 U.S.C. § 103(a) as allegedly being unpatentable over the rules of Algebra.

A telephonic interview was held on August 30, 2006 between Applicant's representative (Jack Friedman) and the Examiner (Ted T. Vo). In the Examiner's Interview Summary, the Examiner states: "Applicants' representative, Jack Friedman, set an Agenda of four issues for discussing/arguing the rejections/objections in the final office action mailed on 7/25/06.

Examiner asked Mr. Friedman to file a request for reconsideration that includes the discussing/arguing of the four issues. Upon filing the request for reconsideration including the arguments as shown in the Agenda, the objection of new subject matter, rejections of 112 first paragraph, DP, and 101, will be withdrawn appropriately.”

In response, Applicant’s representative hereby agrees that the Examiner’s Interview Summary accurately describes the aforementioned telephonic interview held on August 30, 2006.

Applicant respectfully traverses the objection of new subject matter, the double patenting rejections, the § 112 rejections, the § 101 rejections, and the §103 rejections with the following arguments, which including the arguments as shown in the Agenda.

Objection to the Abstract on Grounds of Adding New Matter

The Examiner objected to the amendment to the abstract. In particular, the Examiner objected to the reciting of "the source code is compiled into object code" in the abstract as allegedly not disclosed the specification. However, the specification discloses "compiler optimization of source code". Note that a compiler, by definition, compiles source code into object code as has been known and understood in the field of computer programming for over the past 50 years. Note that a compiler is defined as: "A unit that converts computer programs written in higher-level languages, such as FORTRAN and BASIC, into the machine language (object code) of the computer". See "Modern Dictionary of Electronics" 184 (sixth ed. 1997). A compiler must compile source code into object code; otherwise it cannot be a compiler. Therefore, disclosure of "compiler optimization of source code" states that a compiler is being used to implement the present invention and therefore inherently performs compiler optimization of source code as part of compiling the source code into object code. If the Examiner can find any evidence to support his allegation that a compiler is not required to compile source code into object code, then the Examiner should present such evidence. Ask any computer programmer if a compiler is not required to compile source code into object code.

Based on the preceding argument, Applicant respectfully contends that the objection to the abstract on grounds of adding new matter is improper and should be withdrawn.

Nonstatutory Double Patenting

The Examiner rejected claims 1, 6 and 7 on the ground of alleged nonstatutory double patenting over claim 15 of copending Application No. 11/231,091, (U.S. Patent Application No. 20060015550 A1).

The Examiner rejected claims 1, 6 and 7 under the judicially created doctrine of obviousness-type double patenting as allegedly being respectively unpatentable over claim 1 of U.S. Patent No. 6,578,196 B1.

The Examiner rejected claims 1, 6, and 7 on grounds of judicial double patenting, which repeated the double patenting rejection stated in the prior office action mailed 02/13/2006. Since claims 9, 14, and 19 were not alleged to be subject to a double-patenting rejection, Applicant amended claims 1, 6, and 7 by incorporating the limitations of claims 9, 14, and 19 into claims 1, 6, and 7, respectively, in order to overcome the double-patenting rejection. However, the Examiner does not recognize the amendment of claims 1, 6, and 7, because the Examiner alleges that the amended material ("compiling source code into object code") is not supported in the specification. If that is the case, why did the Examiner not indicate in the office action mailed 02/13/2006 that claims 9, 14, and 19 are not supported in the specification when Applicant could have had an opportunity to find another way to amend claims 1, 6, and 7 to overcome the double patenting rejection of claims 1, 6, and 7? Applicant requests that the present final office action be changed to a non-final office action so that Applicant can amend claims 1, 6, and 7 to overcome the double patenting rejection if necessary, since Applicant was previously misled into thinking that the subject matter of claims 9, 14, and 19 could be used to overcome the double patenting rejection.

Moreover, in consideration of the Applicant's argument *supra* (in relation to the objection to the abstract on grounds of adding new matter) that disclosure of "compiler optimization of source code" states that a compiler is being used to implement the present invention and therefore inherently performs compiler optimization of source code as part of compiling the source code into object code, Applicant respectfully contends that the nonstatutory double patenting rejections of claims 1, 6 and 7 is improper and should be withdrawn.

35 USC § 112, first paragraph and second paragraph

The Examiner rejected claims 1-8, 10-13 and 15-18 under 35 U.S.C. § 112, first paragraph, as allegedly based on a disclosure which is not enabling.

The Examiner rejected claims 1-8, 10-13 and 15-18 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Under 35 USC 112, first paragraph and second paragraph, the Examiner alleges that the amended limitations ("compiling source code into object code") is not supported in the specification. However, this is a new ground of rejection not caused by Applicant's amendment of claims 1, 6, and 7, since the amended claims 1, 6, and 7 incorporates the limitation ("compiling source code into object code") of claims 9, 14, and 19 into claims 1, 6, and 7, respectively, and claims 9, 14, and 19 were not previously rejected on grounds of 35 USC 112, first paragraph and second paragraph. Therefore, the present final office action should be changed to a non-final office action if the Examiner still views "compiling source code into object code" as not being supported in the specification.

Moreover, in consideration of the Applicant's argument *supra* (in relation to the objection to the abstract on grounds of adding new matter) that disclosure of "compiler optimization of source code" states that a compiler is being used to implement the present invention and therefore inherently performs compiler optimization of source code as part of compiling the source code into object code, Applicant respectfully contends that the rejection of claims 1-8, 10-13 and 15-18 under 35 U.S.C. § 112, first paragraph and second paragraph is improper and should be withdrawn.

35 USC § 101

The Examiner rejected claims 1-8, 10-13 and 15-18 under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter.

The Examiner alleges that "compiling source code into object code" is an intended use. The Examiner is correct in stating that the language "for use in compiler optimisation of source code ..." in the preamble is an intended use. However, the language of "compiling source code into object code" in the body of the claim, and not in the preamble, is an active method step and is not an intended use.

The Examiner also analogizes "compiling source code into object code" to transmitting electrical signals to represent the results of calculations to support the Examiner's contention that "compiling source code into object code" does not recite a practical application, which is a totally incorrect analogy. Compiling source code into object code changes code from a non-executable form (which is not a practical form) to an executable form (which is a practical form). Therefore, compiling source code into object code is not analogous to transmission of an electrical signal that represents the results of calculations, which merely transmits the calculational results from one place to another.

Moreover, in consideration of the Applicant's argument *supra* (in relation to the objection to the abstract on grounds of adding new matter) that disclosure of "compiler optimization of source code" states that a compiler is being used to implement the present invention and therefore inherently performs compiler optimization of source code as part of compiling the source code into object code, Applicant respectfully contends that the rejection of claims 1-8, 10-

13 and 15-18 under 35 U.S.C. § 101 is improper and should be withdrawn.

35 U.S.C. § 103(a)

The Examiner rejected claims 1-8, 10-13 and 15-18 under 35 U.S.C. § 103(a) as allegedly being unpatentable over the rules of Algebra.

Applicants respectfully contend that claims 1, 6, and 7 are not unpatentable over the rules of algebra, because the rules of Algebra does not teach or suggest each and every feature of claims 1, 6, and 7.

A first reason why claims 1, 6, and 7 are not unpatentable over the rules of algebra is that the rules of algebra do not teach claimed step (a), namely the step of “recasting said expressions into a form of one or more token pairs arranged sequentially in a string, each said token pair comprising an operator followed by an operand”.

The Examiner argues: “Algebra rules show (a): For example, take $(a+b)(a-b)$, one expression and a^2-b^2 , another expression, they are equivalent and will be recasting into a form $a*a-a*a*b+a*b-b*b$, by using the known rules of algebra”.... Therefore, it would be obvious to an ordinary in the art to apply rules/notation of algebra to implement the claim”.

In response, Applicant asserts that the Examiner has not supplied any evidence from the prior art as to why it is allegedly obvious to perform the step of “recasting said expressions into a form of one or more token pairs arranged sequentially in a string, each said token pair comprising an operator followed by an operand”.

Thus, the Examiner has alleged the following rule of algebra: the algebraic expressions $(a+b)(a-b) = a^2-b^2 = a*a-a*a*b+a*b-b*b$ are equivalent to one another. Then, due to the truth of the preceding rule of algebra the Examiner argues that it is obvious to perform the process steps

of converting $(a+b)(a-b)$ into $a^2-a^2b+a^2b-b^2b$ and of converting a^2-b^2 into $a^2-a^2b+a^2b-b^2b$.

Applicants note, however, that the Examiner has not provided any motivation from the prior art as to why one a person of ordinary skill in the art would find it obvious to perform said process step.

Applicants acknowledge that one could utilize rules of algebra to perform the step of “recasting said expressions into a form of one or more token pairs arranged sequentially in a string, each said token pair comprising an operator followed by an operand”. However, the Examiner must provide motivation for actually performing this step, which the Examiner has not done. For example, even though one could use a teaspoon to dig a grave, it is not obvious to actually use a teaspoon to dig a grave.

Therefore based on the preceding analysis relating to the claimed step (a), Applicants respectfully contend that the Examiner has not established a *prima facie* case of obviousness in relation to claims 1, 6, and 7.

A second reason why claims 1, 6, and 7 are not unpatentable over the rules of algebra is that the rules of algebra do not teach the claimed step (b), namely the step of “reducing said strings in accordance with a set of predetermined simplifying rules”.

The Examiner argues: “Algebra rules show (b): For example $a^2-a^2b+a^2b-b^2b$ is reduced by algebraic rules as a^2b-b^2b . (b) reducing said strings in accordance with a set of predetermined simplifying rules”.... Therefore, it would be obvious to an ordinary in the art to apply rules/notation of algebra to implement the claim”.

In response, Applicant asserts that the Examiner has not supplied any evidence from the

prior art as to why it is allegedly obvious to perform the step of “reducing said strings in accordance with a set of predetermined simplifying rules”.

Thus, the Examiner argues that rules of algebra facilitate reducing the expression $a^*a - a^*b + a^*b - b^*b$ to the expression $a^*a - b^*b$, and it is therefore obvious to perform the process step of reducing the expression $a^*a - a^*b + a^*b - b^*b$ to the expression $a^*a - b^*b$. Applicants note, however, that the Examiner has not supplied any evidence from the prior art as to why it is allegedly obvious to perform the step of “reducing said strings in accordance with a set of predetermined simplifying rules”.

Applicants acknowledge that one could utilize rules of algebra to perform the step of “reducing said strings in accordance with a set of predetermined simplifying rules”. However, the Examiner must provide motivation for actually performing this step, which the Examiner has not done. For example, even though one could use a teaspoon to dig a grave, it is not obvious to actually use a teaspoon to dig the grave.

Therefore based on the preceding analysis relating to the claimed step (b), Applicants respectfully contend that the Examiner has not established a *prima facie* case of obviousness in relation to claims 1, 6, and 7.

A third reason why claims 1, 6, and 7 are not unpatentable over the rules of algebra is that the rules of algebra do not teach the claimed step (c), namely the step of “comparing the reduced strings by matching, to detect equivalence of the two algebraic expressions”.

The Examiner argues: “Algebra rules show (c): For example $(a+b)(a-b) = a^*a - b^*b$; and $a^2 - b^2$ is another expression of $a^*a - b^*b$. In fact $(a+b)(a-b)$ equals to $a^2 - b^2$, equals to a^*a

$-a*b+a*b-b*b$. (c) comparing the reduced strings by matching, to detect equivalence of the two algebraic expressions..... Therefore, it would be obvious to an ordinary in the art to apply rules/notation of algebra to implement the claim”.

In response, Applicant asserts that the Examiner has not supplied any evidence from the prior art as to why it is allegedly obvious to perform the step of “comparing the reduced strings by matching, to detect equivalence of the two algebraic expressions”.

Applicant asserts that the Examiner argues that rules of algebra facilitate reducing the expression $a*a -a*b+a*b-b*b$ to the expression $a*a-b*b$, and it is therefore obvious to perform the process step of reducing the expression $a*a -a*b+a*b-b*b$ to the expression $a*a-b*b$.

Applicants note, however, that the Examiner has not supplied any evidence from the prior art as to why it is allegedly obvious to perform the step of “comparing the reduced strings by matching, to detect equivalence of the two algebraic expressions”.

Applicants acknowledge that one could utilize rules of algebra to perform the step of “comparing the reduced strings by matching, to detect equivalence of the two algebraic expressions”. However, the Examiner must provide motivation for actually performing this step, which the Examiner has not done. For example, even though one could use a teaspoon to dig a grave, it is not obvious to actually use a teaspoon to dig a grave.

In addition, the Examiner has used circular reasoning by arguing that it is obvious to compare the reduced strings by matching to detect equivalence of the two algebraic expressions, in order to detect equivalence of the two algebraic expressions.

Therefore based on the preceding analysis relating to the claimed step (c), Applicants

respectfully contend that the Examiner has not established a *prima facie* case of obviousness in relation to claims 1, 6, and 7.

A fourth reason why claims 1, 6, and 7 are not unpatentable over the rules of algebra is that the rules of algebra do not teach the claimed step (c1), namely the step of “compiling said source code into object code, wherein said source code comprises said two algebraic expressions, and wherein said compiling comprises said recasting, said reducing, and said comparing”.

The Examiner argues: “Official notice is also taken that compilation definition in general is to convert source code into object code in various, complicated, and detailed techniques. Therefore, it would be obvious to an ordinary in the art to apply rules/notation of algebra to implement the claim, and it would be also obvious to an ordinary in the art to include preemption such as compilation in the claim.”

In response, Applicant respectfully contend that the preceding argument by the Examiner is unclear and vague, and does not persuasively argue that it is obvious to perform the step of “compiling said source code into object code, wherein said source code comprises said two algebraic expressions, and wherein said compiling comprises said recasting, said reducing, and said comparing”.

In addition, the rejection of claims 1, 6, and 7 over the rules of algebra is improper with respect to the claimed step (c1), because the rules of algebra do not teach or suggest the feature of “compiling said source code into object code, wherein said source code comprises said two algebraic expressions”. Applicant requests that the Examiner provide a prior art reference that allegedly discloses that the laws of algebra teaches or suggests the feature of “compiling said

source code into object code, wherein said source code comprises said two algebraic expressions”.

Therefore based on the preceding analysis relating to the claimed step (c1), Applicants respectfully contend that the Examiner has not established a *prima facie* case of obviousness in relation to claims 1, 6, and 7.

A fifth reason why claims 1, 6, and 7 are not unpatentable over the rules of algebra is that the Examiner has not provided a persuasive argument as to why it is allegedly obvious to combine steps (a), (b), and (c) sequentially as claimed.

The Examiner argues: “Therefore, it would be obvious to an ordinary in the art to apply rules/notation of algebra to implement the claim.”

In response, Applicant respectfully contends that the preceding argument by the Examiner is conclusory, because the Examiner’s argument concludes what it assumes, namely the alleged obviousness of combining steps (a), (b), and (c) sequentially as claimed. Applicant asserts that the Examiner has not cited any prior art that discloses motivation to support the alleged obviousness of combining steps (a), (b), and (c) sequentially as claimed.

Based on the preceding arguments, Applicants respectfully maintain that claims 1, 6, and 7 are not unpatentable over the rules of Algebra, and that claims 1, 6, and 7 are in condition for allowance. Since claims 2-5 and 8 depend from claim 1, Applicants contend that claims 2-5 and 8 are likewise in condition for allowance. Since claims 10-13 depend from claim 6, Applicants contend that claims 10-13 are likewise in condition for allowance. Since claims 15-18 depend

from claim 7, Applicants contend that claims 15-18 are likewise in condition for allowance.

CONCLUSION

Based on the preceding arguments, Applicant respectfully believes that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicant invites the Examiner to contact Applicant's representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 09-0457.

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Jack P. Friedman
Jack P. Friedman
Registration No. 44,688

Schmeiser, Olsen & Watts
22 Century Hill Drive - Suite 302
Latham, New York 12110
(518) 220-1850